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PROPELLER SYSTEM FOR KITE

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PROPELLER SYSTEM FOR KITE

BACKGROUND OF THE INVENTION

Field of the Invention

This invention relates generally to rotating members, and more particularly to propeller systems for kites.

Description of the Related Art

Aircraft kites such as kites in the shape of airplanes, spacecraft, and fanciful flying animals have been made by others. However, there are substantial disadvantages to making aircraft kites that have propellers as they may require excessive packaging space for shipping and storing, and/or they may be complicated and difficult to assemble and disassemble. What is needed is a propeller system that is easy to assemble and disassemble, and may be packaged in a relatively small package for shipping, storage and display.

SUMMARY OF THE INVENTION

In one embodiment, a propeller system of the present invention includes a rotating member including one or more blade portions configured to couple to each other, a support portion, and an axle portion configured to couple to the rotating member and the support portion.

In another embodiment, the invention is a propeller system including one or more blade portions, including an aperture, configured to couple to each other, a support portion including a support aperture, an axle portion configured to extend through said aperture of said one or more blade portions and said support aperture to couple them, and a base portion configured to couple to said support portion.

These and other objects and advantages of the present invention will be apparent from a review of the following specification and accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a perspective view of a novelty with a propeller system according to one embodiment of the present invention.

Figure 2 is a more detailed perspective view of a propeller system of the present invention.

Figure 3 is a perspective view of a propeller system according to the present invention.

Figure 4 is an exploded view of a propeller system of the present invention.

Figure 5 is an exploded view of a rotating member according to one embodiment of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT(S)

The detailed description set forth below in connection with the appended drawings is intended as a description of presently preferred embodiments of the

invention and is not intended to represent the only forms in which the present invention may be constructed and/or utilized.

A novelty of the present invention is shown in Figure 1, generally at **10**. Novelty **10** typically includes a fuselage portion **12**, and one or more wing portions **14**. Adjacent to the fuselage **12** or to wing portions **14** is a propeller system **20**. Novelty **10** is shown as an airplane-like kite, however, it will be appreciated that novelty **10** may be other items, such as a glider, a scale model, or the like. Propeller system **20** is typically coupled to wing portion **14** by having a portion sewn into the fabric of wing portion **14**, although, many other ways of coupling propeller system **20** to wing portion **14** may be utilized, as desired.

Figure 2 is a more detailed depiction of propeller system **20**. Propeller system **20** typically includes a rotating member **22** that has blade portions **24**. Propeller system **20** further includes an axle portion **34** that extends through propeller system **20** and that rotating member **22** rotates about.

Blade portions **24** are typically 4.0-10.0 inches long, by 0.5-2.0 inches wide, by 0.5-2.0 inches in height with a hub that is about 0.25-1.0 inches in diameter. Axle portion **34** is typically 1.0-4.0 inches in length and 0.03-0.5 inches in diameter. It will be appreciated, however, that other dimensions may be utilized, as desired.

Figure 3 shows a detailed embodiment of propeller system **20**. Again, propeller system **20** typically includes rotating member **22** that includes blade portions **24**. Propeller system **20** also includes a support portion **28** and axle portion **34**. Rotating member **22** and support portion **28** are typically configured with apertures to allow an

axle member, such as axle portion **34** for example, to extend through and couple support portion **28** to rotating member **22**, but other configurations may be utilized.

Support portion **28** is also configured to couple to base portion **40**, such that base portion **40** supports support portion **28**. Support portion **28** is typically 5.0-10.0 inches in length, when flat, and typically snaps together with base portion **40**. Base portion **40** is typically 0.25-1.0 inches in height with a diameter of 2.0-8.0 inches. It will be appreciated, however, that other dimensions may be utilized, as desired.

Figure 4 shows an exploded version of propeller system **20**. Again, propeller system **20** typically includes a rotating member **22** that includes blade portions **24**. Rotating member **22** also includes aperture **26** located generally in the center of rotating member **22**.

Propeller system **20** also includes support portion **28** which includes support aperture **30** and connection portion **32**. Aperture **26** and support aperture **30** are configured to allow axle portion **34** to extend through to rotationally couple rotating member **22** and support portion **28**. Connection portion **32** is configured to couple to base portion **40** at connection portion **42** of base portion **40**. Base portion **40** is typically configured to also couple to a novelty, such as a kite model, and the like.

Propeller system **20** further includes axle portion **34**, which typically includes rod **36** and at least one retaining member **38**. Retaining member **38** may form an interference fit with rod **36**, and may be removable to allow rod **36** to extend through apertures **30** and **26**, for easy assembly and disassembly. Retaining member **38** may then be reconnected to rod **36** to secure rotating member **22** to support portion **28**.

Retaining members **38** are typically made of a soft, plastic or rubber-like material and are typically 0.25-1.0 inches in length.

Figure 4 is a more detailed version of rotating member **22**. Rotating member **22** typically includes one or more blade portions **24**. Each blade portion **24** includes an aperture **26** and interlocking portions **50**. Interlocking portions **50** are configured to couple with other interlocking portions of other blade portions. With this configuration, blade portions may be coupled together when assembled to generally resemble a propeller of an aircraft or other apparatus. Blade portions **24** may then be disassembled to fit into a smaller package for shipping, storage and display.

Interlocking portions **50** typically couple together by an interference fit or friction fit, but many other configurations may be utilized such that blade portions generally resemble a propeller. Blade portions may also fit together loosely, such that the force of the wind when the kite is in flight may cause the interlocking portions of the blade portions to interact with each other, and/or exert force upon each other, to cause them to rotate, and thereby resemble a propeller system of an aircraft. Although two blade portions are shown, it will be appreciated that more could be used to generally resemble a propeller of an aircraft. It will be noted that blade portions **24** can be formed in generally the same shape and be rotated to interlock together. Furthermore, more than one set of blade portions **24** per axle may be used to simulate different types of propellers for aircraft, and the like. Furthermore, a novelty may include numerous propeller systems, as desired.

Interlocking portions typically include extending portions **52**, alternating with

flat portions **54**. An extending portion **52** typically will correspond to a flat portion **54** of another blade portion, such that the two blade portions will interlock. With this configuration, the blade portions may couple to each other to form a propeller-like structure.

All parts of propeller system **20** are typically made from plastic or rubber, but may be made from other materials including ceramic, fabric, or other materials.

Connection portions **32** and **42** may be configured to snap together to form an interference fit, but other configurations for connecting support portion **28** to base portion **40** may be used as desired. Apertures **26** and **30** are configured to have a diameter larger than rod **36** such that rotating member **22** will rotate freely with relatively low forces acting upon it, such as a summer breeze.

It will be appreciated that all portions of propeller system **20** are easily assembled and disassembled. When disassembled, all portions of propeller system **20** will readily fit into a relatively small package, thereby saving packaging, shipping, storage and shelf space.

Blade portions **24** are typically 6.0 to 10.0 inches in length and 0.25 to 1 inch in height. Rod **36** is typically 1.0 to 3.0 inches in length and retaining members **38** are typically 0.25 to 0.75 inches in length. Support portion **28** is typically 5.0 to 10.0 inches in length. Base portion **40** is typically 4.0 to 6.0 inches in diameter. It will be appreciated that other dimensions for all portions can be used as desired.

Retaining members **38** are typically made of a soft, rubber-like compound, but

may be made from other materials including plastic.

Blade portions **24** are typically configured to look like the blades of an aircraft propeller, but may be formed to look like other items.

All parts of propeller system **20** may be made inexpensively and relatively small in size to reduce the size of the package when disassembled for shipping, storage, and when displayed on a retail store shelf.

While the present invention has been described with regards to particular embodiments, it is recognized that additional variations of the present invention may be devised without departing from the inventive concept.